

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالُوا سُبْحَانَكَ

لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ

أَنْتَ الْعَلِيمُ الْحَكِيمُ

صدق الله العظيم

(سورة البقرة - الآية ٣٢)

# **ELECTROMYOGRAPHIC EVALUATION OF MUSCLE RELAXANTS IN REDUCING POSTOPERATIVE MUSCLE SPASM AFTER SURGICAL REMOVAL OF IMPACTED MANDIBULAR THIRD MOLAR**

## ***Thesis***

Submitted to the Faculty of Oral and Dental Medicine,  
Cairo University in partial fulfillment of the requirements of  
the master degree in oral and maxillofacial surgery

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## *Acknowledgement*

I would like to thank *God* who stood by me all along, who paved the way and only by his will everything can be achieved.

I would like to express my deep thank and gratitude to *Dr. Ragia Mohammed Mounir*, Professor of Oral and Maxillofacial Surgery, Faculty of Oral and Dental Medicine, Cairo University, for her interest, kind supervision, unlimited assistance, great effort, great support and encouragement throughout this work.

I am deeply grateful to *Dr. Khaled Atef El-Hayes*, Assistant Professor of Oral and Maxillofacial Surgery, Faculty of Oral and Dental Medicine, Cairo University, for his exceptional assistance, great effort and time throughout this work.

I would like to express my hands to *Dr. Mohamed Reda Awad*, Professor of Rheumatology, Faculty of Medicine, Al Azhar University, for his great help.

Finally, special thanks to my father for his tolerance, support and encouragement throughout this work and my entire life.

# *Dedication*

*To my Loving Father*

*To Soul of my Mother*

*To my Sister and My Brother*

# **CONTENTS**

	<i>Page</i>
<b>Introduction .....</b>	<b>1</b>
<b>Review of Literature .....</b>	<b>3</b>
<b>Aim of the Study .....</b>	<b>31</b>
<b>Materials and Methods .....</b>	<b>32</b>
<b>Results.....</b>	<b>47</b>
<b>Discussion .....</b>	<b>73</b>
<b>Summary and Conclusions .....</b>	<b>79</b>
<b>References.....</b>	<b>82</b>
<b>Arabic Summary.....</b>	

## **LIST OF TABLE**

<b>Table (1):</b>	Showing age and type of impaction for control group .....	33
<b>Table (2):</b>	Showing age and type of impaction for study group .....	33
<b>Table (3):</b>	Representing the pain scores for control group .....	47
<b>Table (4):</b>	Representing the pain scores for study group .....	48
<b>Table (5):</b>	The means, standard deviation (SD) values and results of Student's t-test for the comparison between pain scores in the two groups.....	49
<b>Table (6):</b>	The mean differences, standard deviation values and results of paired t-test for the changes by time in tizanidine group .....	50
<b>Table (7):</b>	mean differences, standard deviation values and results of paired t-test for the changes by time in control group .....	51
<b>Table (8):</b>	Readings of mouth opening for control group.....	52
<b>Table (9):</b>	Readings of mouth opening for study group .....	53
<b>Table (10):</b>	The means, standard deviation (SD) values and results of Student's t-test for the comparison between mouth opening results of the two groups .....	54
<b>Table (11):</b>	The mean differences, standard deviation values and results of paired t-test for the changes by time in tizanidine group .....	55

<b>Table (12):</b> The mean differences, standard deviation values and results of paired t-test for the changes by time in control group .....	56
<b>Table (13):</b> readings for masseter and temporalis muscles at maximum biting for (Control group) .....	61
<b>Table (14):</b> Readings for masseter and temporalis muscles at maximum biting for (study group) .....	62
<b>Table (15):</b> The means, standard deviation (SD) values and results of Mann Whitney U test for the comparison between EMG results of the two groups .....	63
<b>Table (16):</b> The mean differences, standard deviation values and results of Wilcoxon signed-rank test for the changes by time in tizanidine group .....	65
<b>Table (17):</b> The mean differences, standard deviation values and results of Wilcoxon signed-rank test for the changes by time in Control group .....	66
<b>Table (18):</b> Results of Pearson's correlation coefficient for the correlation between Masseter muscle EMG results and mouth opening in the two groups .....	67
<b>Table (19):</b> Results of Pearson's correlation coefficient for the correlation between Temporalis muscle EMG results and mouth opening in the two groups .....	70



## **LIST OF FIGURES**

<b>Figure (1):</b>	The front and back of visual analog scale .....	34
<b>Figure (2):</b>	Patient chart.....	35
<b>Figure (3):</b>	A photograph showing impacted mandibular third molar.....	36
<b>Figure (4):</b>	A radiograph showing a panoramic view for impacted mandibular third molar .....	36
<b>Figure (5):</b>	A photograph showing measurement of mouth opening using a caliper.....	37
<b>Figure (6):</b>	A photograph showing surgical removal of impacted mandibular third molar .....	39
<b>Figure (7):</b>	A photograph showing suturing after removal of impacted mandibular third molar .....	39
<b>Figure (8):</b>	Postoperative panoramic radiograph.....	40
<b>Figure (9):</b>	A photograph showing the EMG Machine .....	43
<b>Figure (10):</b>	A photograph showing the surface electrodes .....	43
<b>Figure (11):</b>	A photograph showing the position of surface electrodes & EMG recording for masseter muscle .....	45
<b>Figure (12):</b>	A photograph showing the position of surface electrodes & EMG recording for temporalis muscle .....	45
<b>Figure (13):</b>	A bar chart showing the pain scores for both groups.....	49
<b>Figure (14):</b>	A histogram showing change by time in pain scores in the study group.....	50

<b>Figure (15):</b> A histogram showing change by time in pain scores in the control group .....	51
<b>Figure (16):</b> A bar chart showing the mouth opening for both groups .....	54
<b>Figure (17):</b> A histogram showing change by time in mouth opening in the study group .....	55
<b>Figure (18):</b> A histogram showing change by time in mouth opening in the control group .....	56
<b>Figure (19):</b> Electromyogram showing preoperative maximum biting of masseter muscle in control group .....	57
<b>Figure (20):</b> showing maximum biting of masseter muscle 4 days postoperative in control group .....	57
<b>Figure (21):</b> Electromyogram showing maximum biting of masseter muscle 10 days postoperative in control group.....	57
<b>Figure (22):</b> Electromyogram showing preoperative maximum biting of temporalis muscle in control group .....	58
<b>Figure (23):</b> Electromyogram showing maximum biting of temporalis muscle 4 days postoperative in control group.....	58
<b>Figure (24):</b> Electromyogram showing maximum biting of temporalis muscle 10 days postoperative in control group.....	58
<b>Figure (25):</b> Electromyogram showing preoperative maximum biting of masseter muscle in tizanidine group.....	59

<b>Figure (26):</b> Electromyogram showing maximum biting of masseter muscle 4 days postoperative in tizanidine group.....	59
<b>Figure (27):</b> Electromyogram showing maximum biting of masseter muscle 10 days postoperative in tizanidine group.....	59
<b>Figure (28):</b> Electromyogram showing preoperative maximum biting of temporalis muscle in tizanidine group.....	60
<b>Figure (29):</b> Electromyogram showing maximum biting of temporalis muscle 4 days postoperative in tizanidine group.....	60
<b>Figure (30):</b> Electromyogram showing maximum biting of temporalis muscle 10 days postoperative in tizanidine group.....	60
<b>Figure (31):</b> A bar chart showing the mean amplitude of maximum biting for masseter and temporalis muscle for both groups .....	63
<b>Figure (32):</b> A histogram showing change by time of masseter and temporalis muscles for the study group.....	65
<b>Figure (33):</b> A histogram showing change by time of masseter and temporalis muscles for control group.....	66
<b>Figure (34):</b> A histogram showing correlation between masseter muscle activity and mouth opening pre-operative .....	67
<b>Figure (35):</b> A histogram showing correlation between masseter muscle activity and mouth opening after 4 days .....	68

<b>Figure (36):</b>	A histogram showing correlation between masseter muscle activity and mouth opening after 10 days .....	68
<b>Figure (37):</b>	A histogram showing correlation between masseter muscle activity and mouth opening pre-operative .....	69
<b>Figure (38):</b>	A histogram showing correlation between masseter muscle activity and mouth opening after 4 days .....	69
<b>Figure (39):</b>	A histogram showing correlation between masseter muscle activity and mouth opening after 10 days .....	69
<b>Figure (40):</b>	A histogram showing correlation between temporalis muscle activity and mouth opening pre-operative .....	70
<b>Figure (41):</b>	A histogram showing correlation between temporalis muscle activity and mouth opening after 4 days .....	71
<b>Figure (42):</b>	A histogram showing correlation between temporalis muscle activity and mouth opening after 10 days .....	71
<b>Figure (43):</b>	A histogram showing correlation between temporalis muscle activity and mouth opening pre-operative .....	72
<b>Figure (44):</b>	A histogram showing correlation between temporalis muscle activity and mouth opening after 4 days .....	72
<b>Figure (45):</b>	A histogram showing correlation between temporalis muscle activity and mouth opening after 10 days .....	72

# Introduction

## **INTRODUCTION**

Surgical extraction of third molars may be considered as one of the routine aspects of oral surgery. The involved trauma to soft and bony tissues make the Patients complain from the pain, swelling, and trismus associated with the inflammatory response following third molar surgical extractions.<sup>(1)</sup>

The main reason why there are few reports in these minor complications may be because of their reversible nature and lack of postoperative treatment.<sup>(2)</sup>

Wound healing involves an inflammatory stage which begins the moment tissue injury occurs and, in the absence of factors that prolong inflammation, lasts 3 to 5 days. The early vascular responses to injury begin with an Initial transient vasoconstriction which is soon followed by vasodilatation. Vasodilatation is caused by the actions of histamine, prostaglandins, and other vasodilator substances. Dilation causes intercellular gaps, which allows egress of plasma and emigration of leukocytes. Corresponding clinical manifestations include redness, heat, pain, swelling and trismus.<sup>(3)</sup>

Trismus is the result of inflammation involving the muscles of mastication. Inflammatory response to the surgical procedure is sufficiently widespread to involve several muscles of mastication. The most frequent muscles that may be affected are masseter and temporalis muscles.<sup>(3)</sup>

One of the most diagnostic tools for examination of the degree of tonicity of muscles is the electromyography (EMG) which involves testing the electrical activity of muscles. With the new modalities and methods of using EMG, it can be used for proper diagnosis of muscle trismus and fatigue.

Muscle contraction occurs physiologically by the nerve impulse being transmitted across the myoneural junction, the muscle contracts and electrical impulse is given off which can be recorded by EMG.